

WHAT IS CLAIMED IS:

1. A lithographic apparatus comprising:
 - an illumination system that supplies a projection beam of radiation;
 - an array of individually controllable elements that impart the projection beam with a pattern;
 - a substrate table that supports a substrate during an exposure operation;
 - a projection system that projects the patterned beam onto a target portion of the substrate;
 - a control system that sends a control signal to set each of the individually controllable element in a given state; and
 - a compensation device that adjusts the control signal applied to a first individually controllable element in the array of individually controllable elements based on the control signal applied to at least one other individually controllable element.
2. The lithographic apparatus according to claim 1, wherein the compensation device adjusts the control signal applied to the first individually controllable element based on the control signal applied to a group of individually controllable elements that are nearest neighbors of the first individually controllable element.
3. The lithographic apparatus according to claim 1, wherein the compensation device adjusts the control signal applied to the first individually controllable element based on the control signal applied to a group of individually controllable elements that are next-nearest neighbors of the first individually controllable element.

4. The lithographic apparatus according to claim 1, wherein the compensation device is arranged to adjust the control signal applied to the first individually controllable element based on the control signal applied to a group of individually controllable elements that are mechanically linked to the first individually controllable element.

5. The lithographic apparatus according to claim 1, wherein the compensation device comprises:

a memory module that stores compensation data representing an expected effect on the first controllable element caused by a signal applied to at least one other individually controllable element.

6. The lithographic apparatus according to claim 5, wherein the compensation device is coupled to the control system to provide a control signal that is sent to the first individually controllable element that is adjusted by an amount based on the control signal applied to at least one other individually controllable element and the compensation data provided by the memory module.

7. The lithographic apparatus according to claim 5, wherein the compensation data takes into account one or more of the following forces: electrostatic, magnetostatic, and mechanical.

8. The lithographic apparatus according to claim 5, wherein at least a contribution to the compensation data is obtained from measurements of an effect the first individually controllable element caused by a control signal applied to at least one other individually controllable element.

9. The lithographic apparatus according to claim 5, wherein at least a contribution to the compensation data is obtained from a calculation of an expected effect on the first individually controllable element caused by a control signal applied to at least one other individually controllable element, the calculation being based on a geometry of the array of individually controllable elements.

10. The lithographic apparatus according to claim 1, wherein the compensation device comprises:

a compensating member associated with the first individually controllable element, the compensating member being arranged to receive the control signal from the control system, adjust the level of the received signal as a predetermined function of the control signal to be applied to at least one other individually controllable element, and transmit the adjusted control signal to the first individually controllable element.

11. The lithographic apparatus according to claim 1, wherein the compensation device is located on a substrate supporting the array of individually controllable elements.

12. A calibration method for an array of individually controllable elements in a lithographic apparatus, wherein a known control signal is applied to a first individually controllable element and the resulting disturbance of at least one other individually controllable element is recorded.

13. A calibration method according to claim 12, wherein the method is applied repeatedly for known control signals of different magnitudes.

14. A manufacturing method, comprising:
 - using an array of individually controllable elements to impart a projection beam with a pattern in its cross-section;
 - projecting the patterned beam of radiation onto a target portion of a substrate;
 - applying a control signal to each of a plurality of the individually controllable elements to set each of the plurality of individually controllable elements in a desired state; and
 - adjusting the control signal applied to a first one of the plurality of individually controllable elements based on the control signal to be applied to at least one other individually controllable element.